

Architectural Services

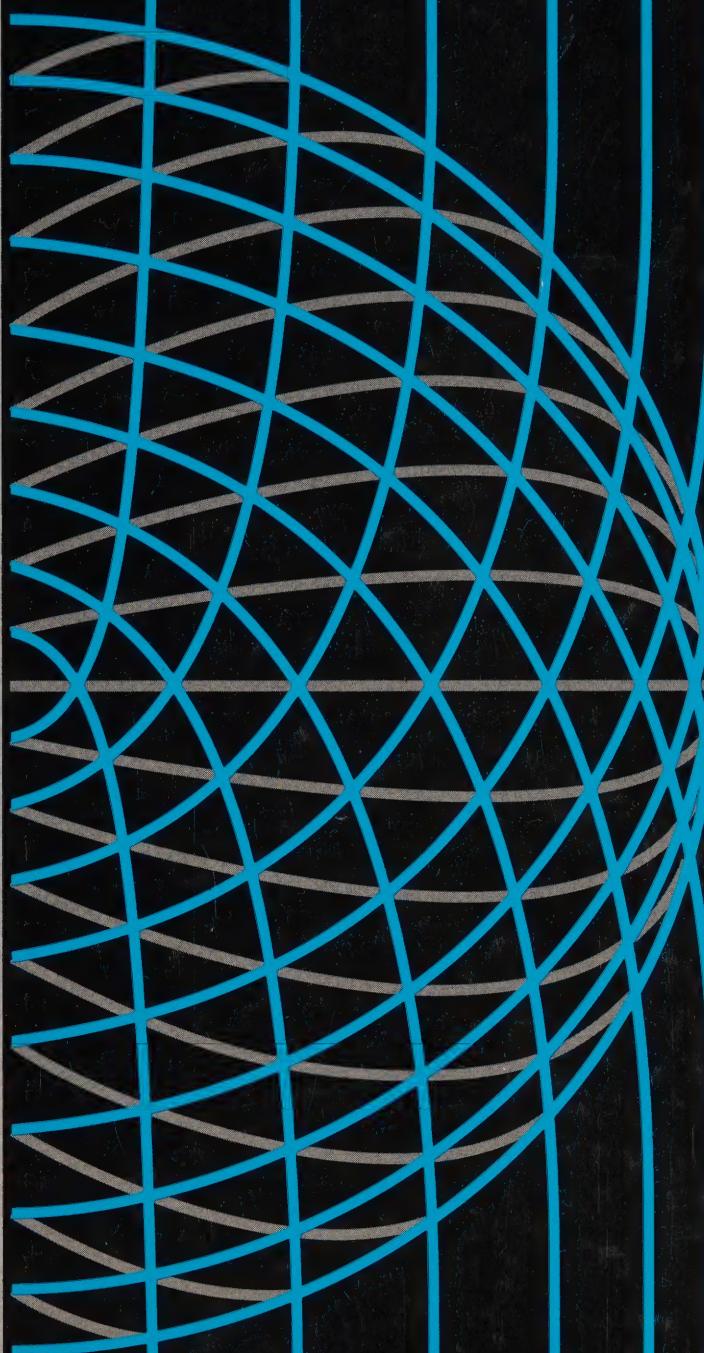
CAI
IST 1
-1991
A67

3 1761 11764969 9



Industry, Science and
Technology Canada

Industrie, Sciences et
Technologie Canada



N
D
U
S
T
R
Y
P
O
F
I
L
E

Business Service Centres / International Trade Centres

Industry, Science and Technology Canada (ISTC) and International Trade Canada (ITC) have established information centres in regional offices across the country to provide clients with a gateway into the complete range of ISTC and ITC services, information products, programs and expertise in industry and trade matters. For additional information contact any of the offices listed below.

Newfoundland

Atlantic Place
Suite 504, 215 Water Street
P.O. Box 8950
ST. JOHN'S, Newfoundland
A1B 3R9
Tel.: (709) 772-ISTC
Fax: (709) 772-5093

New Brunswick

Assumption Place
12th Floor, 770 Main Street
P.O. Box 1210
MONCTON, New Brunswick
E1C 8P9
Tel.: (506) 857-ISTC
Fax: (506) 851-6429

Prince Edward Island

Confederation Court Mall
National Bank Tower
Suite 400, 134 Kent Street
P.O. Box 1115
CHARLOTTETOWN
Prince Edward Island
C1A 7M8
Tel.: (902) 566-7400
Fax: (902) 566-7450

Quebec

Tour de la Bourse
Suite 3800, 800 Place Victoria
P.O. Box 247
MONTREAL, Quebec
H4Z 1E8
Tel.: (514) 283-8185
1-800-361-5367
Fax: (514) 283-3302

Ontario

Dominion Public Building
4th Floor, 1 Front Street West
TORONTO, Ontario
M5J 1A4
Tel.: (416) 973-ISTC
Fax: (416) 973-8714

Manitoba

8th Floor, 330 Portage Avenue
P.O. Box 981
WINNIPEG, Manitoba
R3C 2V2
Tel.: (204) 983-ISTC
Fax: (204) 983-2187

Saskatchewan

S.J. Cohen Building
Suite 401, 119 - 4th Avenue South
SASKATOON, Saskatchewan
S7K 5X2
Tel.: (306) 975-4400
Fax: (306) 975-5334

Alberta

Canada Place
Suite 540, 9700 Jasper Avenue
EDMONTON, Alberta
T5J 4C3
Tel.: (403) 495-ISTC
Fax: (403) 495-4507

Suite 1100, 510 - 5th Street S.W.
CALGARY, Alberta
T2P 3S2
Tel.: (403) 292-4575
Fax: (403) 292-4578

British Columbia

Scotia Tower
Suite 900, 650 West Georgia Street
P.O. Box 11610
VANCOUVER, British Columbia
V6B 5H8
Tel.: (604) 666-0266
Fax: (604) 666-0277

Yukon

Suite 301, 108 Lambert Street
WHITEHORSE, Yukon
Y1A 1Z2
Tel.: (403) 668-4655
Fax: (403) 668-5003

Northwest Territories

Precambrian Building
10th Floor
P.O. Bag 6100
YELLOWKNIFE
Northwest Territories
X1A 2R3
Tel.: (403) 920-8568
Fax: (403) 873-6228

ISTC Headquarters

C.D. Howe Building
1st Floor East, 235 Queen Street
OTTAWA, Ontario
K1A 0H5
Tel.: (613) 952-ISTC
Fax: (613) 957-7942

ITC Headquarters

InfoExport
Lester B. Pearson Building
125 Sussex Drive
OTTAWA, Ontario
K1A 0G2
Tel.: (613) 993-6435
1-800-267-8376
Fax: (613) 996-9709

Publication Inquiries

For individual copies of ISTC or ITC publications, contact your nearest Business Service Centre or International Trade Centre. For more than one copy, please contact

For Industry Profiles:

Communications Branch
Industry, Science and Technology
Canada
Room 704D, 235 Queen Street
OTTAWA, Ontario
K1A 0H5
Tel.: (613) 954-4500
Fax: (613) 954-4499

For other ISTC publications:

Communications Branch
Industry, Science and Technology
Canada
Room 208D, 235 Queen Street
OTTAWA, Ontario
K1A 0H5
Tel.: (613) 954-5716
Fax: (613) 954-6436

For ITC publications:

InfoExport
Lester B. Pearson Building
125 Sussex Drive
OTTAWA, Ontario
K1A 0G2
Tel.: (613) 993-6435
1-800-267-8376
Fax: (613) 996-9709

Canada



I N D U S T R Y P R O F I L E

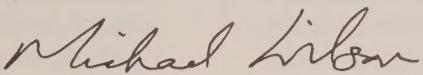
1990-1991

ARCHITECTURAL SERVICES

FOREWORD

In a rapidly changing global trade environment, the international competitiveness of Canadian industry is the key to growth and prosperity. Promoting improved performance by Canadian firms in the global marketplace is a central element of the mandates of Industry, Science and Technology Canada and International Trade Canada. This Industry Profile is one of a series of papers in which Industry, Science and Technology Canada assesses, in a summary form, the current competitiveness of Canada's industrial sectors, taking into account technological, human resource and other critical factors. Industry, Science and Technology Canada and International Trade Canada assess the most recent changes in access to markets, including the implications of the Canada-U.S. Free Trade Agreement. Industry participants were consulted in the preparation of the profiles.

Ensuring that Canada remains prosperous over the next decade and into the next century is a challenge that affects us all. These profiles are intended to be informative and to serve as a basis for discussion of industrial prospects, strategic directions and the need for new approaches. This 1990-1991 series represents an updating and revision of the series published in 1988-1989. The Government will continue to update the series on a regular basis.



Michael H. Wilson
Minister of Industry, Science and Technology
and Minister for International Trade

Structure and Performance

Structure

The architectural services industry comprises private firms licensed under provincial legislation to provide independent architectural design and consulting services to the public. This industry is often considered an integral part of the larger building construction sector. Profiles have also been prepared for the related industries of

- Construction Contracting
- Consulting Engineering
- Real Estate Development

Architects specialize in integrating the needs of the client and human occupants with the physical configuration of a

space. Traditionally, architects play the dominant role in the design of buildings that are primarily people-oriented rather than industrial. Architects design buildings used for educational, health care, residential, commercial, religious, sport, medical and institutional purposes. In addition, architects carry out such non-design functions as feasibility studies, heritage restoration, urban planning and project management. Architectural firms act as the principal consultant to the client, usually a building owner. They receive, or assist in defining, the client's requirements, translate them into the overall building design, produce working drawings and contract documents, review the construction process, and authorize payment. This traditional role is now expanding to include a managing or co-ordinating consulting role.

On projects that are large and technically sophisticated, consulting engineers are also engaged. Consulting engineers

CA /
ISTI /
- 1991
A67



are usually specialists in structural, electrical, mechanical or other engineering design services and are normally subcontracted by the architect. The roles of principal consultant and subcontracting consultant are sometimes reversed when the engineering aspect of a project is the major component, as in the cases of industrial or chemical plants, where the primary focus of the work relates to the efficiency of the industrial process. Engineers apply expertise to some technical aspect of a building, whereas architects create or design not only the efficient use of space for the client's purposes, but also features that contribute to the comfort, health, safety, enjoyment and aesthetic pleasure of the occupants.

Architects in Canada are self-governing professionals, operating under authority granted to them by provincial legislation. This provincial legislation, known as the *Architects Act* in each province, gives the architectural association in each province the authority to determine the qualifications for registration, to license all architects within the province, to allow the practice of architecture to only those holding such licences, and to ensure that all holders of licences maintain an acceptable level of professional service. The purpose of these Acts is to ensure that architects responsible for the design of buildings used by the public are properly trained and qualified. These procedures are similar to those of most countries throughout the world, although some countries, notably Sweden, Norway, Finland, the Netherlands and Yugoslavia, have no legislation. In these countries, anyone is permitted to call himself or herself an architect. In other countries, regulation and legislation differ from those in Canada and often are not as rigidly enforced.

Architectural firms are generally small businesses, with an average of five employees each. One reason for the small firm size is the preference of most architects to maintain direct personal involvement in the design aspect of their projects. Perhaps because managing a large organization usually leaves little opportunity for such personal involvement, only about 6 percent of the 3 200 architectural firms operating in Canada maintained more than one office in 1991. Total employment that year was estimated at 11 500 people.

Only about one-quarter of Canadian architectural firms are incorporated. Architectural firms, like other businesses in Canada, can incorporate and receive business or contract limitation to liability in all provinces except Quebec. However, in all parts of Canada, unlike other businesses, architectural firms do not receive any limitation of professional liability because provincial legislation holds architects liable for their work for life. This liability effectively eliminates one of the main advantages of incorporation.

The industry is almost totally Canadian-owned. While some of the leading Canadian firms are active abroad, architectural firms in general are not. Only five Canadian firms are

known to have permanent branch offices outside Canada. A number of others have associated themselves with local firms in other countries under local registration requirements. Such links allow them to gain local professional knowledge.

Firms with established offices in foreign markets, frequently employ local staff and managers because of difficulties in obtaining visas and work permits for foreign personnel in those countries. The actual architectural work may be carried out in either the foreign office or the home office. The major export market for Canadian architectural services is the United States, which provides about 35 percent of Canadian industry revenues from foreign markets.

More than half of the foreign projects carried out by Canadian firms involve architects in less than their full range of services, mainly because of the foreign licensing requirement and the practical advantages of having a local joint venture partner. Canadian architects often provide only conceptual designs in co-operation with a local firm or perform only related services, such as facilities management, urban design or technology transfers. Most countries have a fairly high degree of domestic capability to meet their own requirements and employ foreign firms only for expertise not available locally.

Performance

From the limited data available, it is estimated that the industry experienced a lower growth rate after 1975 than it enjoyed in the 1950s and 1960s. From 1977 to 1982, the industry experienced an average real growth in revenue (in constant 1981 dollars) of less than 2 percent per year. During the same period, the number of firms increased by an average of 14 percent per year.

From 1982 to 1985, the growth in revenues in constant 1981 dollars increased somewhat to about 4 percent per year. In 1986, the latest year for which reliable statistics are available, an improvement in business resulted in an estimated average real growth of about 5 percent per year. This growth occurred primarily in Ontario and Quebec.

Strengths and Weaknesses

Structural Factors

Legislation controlling architects and the practice of architecture varies slightly from province to province. This causes minor impediments to architects wishing to do business in provinces other than the one in which they are licensed (e.g., a firm registered to practise in Ontario but wishing to do business in Alberta or British Columbia). Provincial legislation controls not only the licensing of architects, but also many of the business aspects of architectural



practice, including the type of service they can offer to the public, the right of architectural firms to integrate with firms offering related services such as consulting engineering and interior design, and ownership of architectural firms. Provincial legislation, while not prohibiting an architect from acting as a developer, does restrict the activities of architectural design firms, prohibiting them from engaging in the design-build business for a client. The purpose of the legislation is to ensure that the architect has no financial interest in construction contracts in order to avoid conflicts of interest arising from a dual capacity as the client's representative and the builder. Two of the many services the architect traditionally provides to a client are to certify that the building has been built in accordance with the plans, specifications and all applicable codes and regulations and to authorize payment to the builder.

Ownership of architectural firms in Canada is usually restricted to a majority control by licensed architects. Architects in Canada are professionals who usually enter this industry because of their personal interest in designing buildings. Generally, they are not interested in developing large corporate organizations. Consequently, even in Ontario and other provinces where it is permitted, architectural firms have shown little interest in integration with other professionals.

In Canada, design-build projects are usually promoted and undertaken by developers, who then engage an architectural firm or use in-house design capability. In these cases, if an architect is engaged, the client is the developer and not the ultimate building user or purchaser. While this approach can result in effective construction projects, the independent, unbiased, professional opinion may be overshadowed by the economic priorities of the developer.

Most large integrated corporations in other countries that provide architectural services do so as part of a broad range of services, which often include a turnkey capability. These firms are often national or multinational corporations, organized and directed by engineers, developers or others with a more general financial or business type of orientation, rather than by professional architects.

The U.S. architectural industry serves as a useful comparison, as it is Canada's nearest neighbour and major competitor. In 1989, the U.S. architectural industry consisted of about 18 000 firms, employing an estimated 140 000 persons. In both countries, the industry is composed of a vast number of very small firms. Fifty percent of the firms have a staff of only five people, while over 50 percent of the total revenues are produced by the top 7 percent of firms. One major difference between the United States and Canada is the number and size of these large firms. In 1989, the United States had 54 firms with over \$7 million in revenue, while Canada had 7 firms in that range. These very large firms

account for a significantly high proportion of the domestic revenues and virtually all of the foreign billings.

In proportion to its population, Canada has almost twice as many architectural firms as the United States. This is largely because the building construction industry in Canada is also approximately twice the size of the U.S. industry as a proportion of gross domestic product (GDP), possibly indicating that the U.S. infrastructure is at a more mature level of development or that Canada's more severe climate entails costlier building requirements.

There is a much higher proportion of architectural firms with engineering capability in the United States than in Canada. In the United States, these integrated firms are able to offer a larger staff with a wider range of services, and they account for 45 percent of all foreign billings. Only 55 of the top 300 U.S. design firms are purely architectural. Although no accurate statistics are available, it is estimated that about 10 architectural firms in Canada are able to offer integrated architectural and engineering services. The number of engineering firms that offer integrated engineering and architectural services is much larger in both countries.

One significant difference between the two countries is that the licensing authority in the United States is a board appointed by the state government rather than the architectural association. Under this system, American architects have less influence or control in establishing the licensing requirements or qualifications than Canadian architects. This may account in part for the greater uniformity in licensing qualifications between provinces in Canada than between states in the United States.

Canadian billings in foreign markets are relatively small. Some Canadian firms have been successful in international markets, but the majority lack the size, experience and large financial resources required to organize an effective foreign marketing effort. Moreover, only a few Canadian firms have been able to develop an expertise in any one field of architecture. This places them at a disadvantage, as foreign clients usually go abroad to seek a specialist with an expertise that is not available locally.

The strength of the leading Canadian firms lies in their quality of design and use of technology. The Canadian construction industry is a leader in the development and use of new materials and construction techniques, and Canadian architects are quick to incorporate these into their new building designs.

Canada's leading firms are very competitive in the purely architectural role, as can be illustrated by the number of international competitions they have won. However, as previously noted, as an industry of predominantly small firms, they lack the resources to maintain a sustained foreign marketing effort.



As a result, Canadian billings in foreign markets in 1986 were estimated to account for only 1 percent of total revenues. The low involvement of Canadian architects in foreign markets is partly because they are prohibited from acting as contractors or providing turnkey services, unlike large corporations from the United States, the United Kingdom, France and Japan. Consortia or joint ventures are permitted between independent firms, and these techniques are used by Canadian architects on a project-by-project basis.

Having architects as independent consultants serves clients well, but inhibits the formation of large, integrated corporations. As a consequence, the substantial portion of the export market that is composed of turnkey projects appears to be lost to Canadian architectural firms. The real extent of this business opportunity is difficult to estimate, however, because the majority of firms from other countries undertaking turnkey projects are neither architectural firms nor firms headed by architects. They are more often engineering, contracting or manufacturing corporations that take the lead in organizing a design-build team, which includes an architectural firm or in-house architectural capability. While this foregone business may be significant, it is not considered to be part of the normal architectural market for Canadian architects. The turnkey project is more closely related to the normal market for real estate developers than for independent architectural services. Under a turnkey operation, a client requires a firm price for the combined design and construction phases of the project. It is impossible for the architect, as an independent designer, to guarantee the price of a project when another firm has the responsibility for the contracting or construction part of the project. The loss of this potential market is offset to some extent by the reputation gained by Canadian architects as being pre-eminently disposed to providing an unbiased professional service to their clients. This role would be forfeited if the architect acted as the designer and developer.

Trade-Related Factors

There are no tariffs in architectural consulting services, as no product is imported or exported. However, most countries, including Canada and the United States, have non-tariff restrictions that control the provision of traditional architectural services by foreign firms. These restrictions are more irritants than barriers, as many experienced firms have found ways to circumvent them through local joint ventures or subcontract arrangements. Other professions, such as consulting engineering, are also affected by similar irritants, which include professional licensing, requirements for temporary entry of professionals, work permits and local preferential procurement practices.

All architectural firms operating in the United States must be registered and licensed by state licensing boards, whose regulations vary from state to state. Often in the past, some states have required a Canadian architect to write examinations to obtain a licence.

American or other foreign architectural firms attempting to compete in Canada face a similar regulatory regime. They must meet provincial licensing requirements, obtain a temporary licence or enter into a joint venture with a Canadian firm. There are no specific restrictions against foreign architects registering in any province if the provincial architectural association recognizes the association of architects of which the applicant is a member as one with similar objectives and standards as the host provincial association.

The Canada-U.S. Free Trade Agreement (FTA), implemented on 1 January 1989, has aided the Canadian industry in three ways:

- Temporary-entry permits for professionals have been made much easier to obtain. Entry into each country for business purposes is now a routine procedure. Firms must still meet the appropriate licensing requirements of the jurisdiction in which they wish to practise.
- Future regulations cannot be more restrictive than the current ones.
- An accord between American and Canadian architectural associations sets out a plan and timetable for both countries to work towards the harmonization of their licensing and work practices as well as the regulation of professional conduct before the end of 1991.

Progress towards a reciprocity agreement between architects in Canada and the United States has been significant. In 1991, an agreement was reached between the Committee of Architectural Councils and the National Council of Architectural Registration Boards, the umbrella organizations responsible for co-ordinating architectural regulatory matters in Canada and the United States, respectively. The agreement ratified standards that will allow qualified architects from each country to be registered in the other. The establishment of mutually recognized criteria completed an intensive two-year effort.

Within Canada, provincial barriers to practice have also been removed. In 1989, the provincial architectural associations agreed upon the common goal of guaranteeing the right to practise on a national basis to a competent Canadian registered architect. Once granted, no re-examination or further qualification of that professional is necessary, except for specific regional issues such as laws, language and local conditions that have been identified within the boundaries and jurisdiction of each professional association. This goal was achieved in December 1991.



This elimination of provincial barriers is based on a uniform standard of certification by all provincial associations with respect to education, postsecondary experience and registration examination requirements.

The provincial associations recognize that shaping the commitment to full reciprocity in Canada should be done with the understanding that the effort eventually should satisfy international standards. They have also adopted common admission standards, which would allow portability of individual registration with the United States as well as between provinces. Local preferential procurement practices exist in both Canada and the United States. While having no restrictions against foreign firms, the General Services Administration of the U.S. government awards contracts only to firms with an operational office in the specific location of the project. This will not change under the FTA. Most provincial and municipal governments in Canada also have local preference practices. The Canadian federal government does not have specific restrictions relating to the engagement of non-Canadian architectural firms. However, foreign firms must meet the same registration criteria as Canadian firms, including being licensed to practise in the province of the project. Preference is often also given to firms that have an operational office in the region of the project, but this can, for legitimate reasons, be related to the need for close communication between the architect and the client or supervision on the site. As in the United States, it is anticipated that this policy will be unaffected by the FTA.

Four major handicaps facing Canadian firms restrict the export of Canadian architectural services:

- strong competition arising when Canadians attempt to establish themselves in markets where other foreign firms are already firmly entrenched;
- licensing restrictions and immigration regulations imposed by other nations, including newly industrialized countries (NICs), that have developed or are in the process of developing their own architectural capability, which usually fulfills most of their requirements;
- the small size of Canadian firms, which tend to lack the human and financial resources of their international competitors; and
- the lack of integrated architectural firms with design-build or turnkey capability in Canada.

Architectural consulting requires a concerted effort to promote the capabilities of the firm and to secure contracts. It is more difficult to gain the confidence of a client when selling an intangible concept than when selling a tangible product.

A number of visits to potential clients are usually required for the architect to develop credibility. In the export market, this need translates into high travel costs. In addition, the need to provide clients with preliminary plans and drawings that illustrate the architect's concept before signing a contract can cost hundreds of thousands of dollars, money that is not reimbursed to unsuccessful firms.

Technological Factors

Architects perform little scientific research and development (R&D), although they often act in a consulting role in testing or applying the results of R&D. However, they play an important role in the innovation process by developing new uses for existing materials or by identifying requirements for new ones. Architectural design by definition is highly innovative. New concepts for building often require or encourage R&D by material or component manufacturers, resulting in the development of new materials or products. Architects frequently work closely with manufacturers to advise on and encourage the development of a specific product for use in a building. In this way, while not actively involved in R&D per se, architects can be considered active participants in the national R&D effort.

There are barriers that impede effective innovation by architects. The provincial government legislation and related by-laws under which architectural firms are licensed restrict the financial interest of architects in any building material or product, as this may conflict with the best interests of the clients. The scale of building projects can be very large, and may exceed the financial risk or liability that architectural firms may be willing to accept in using innovative materials or techniques. Since architectural innovation is usually non-proprietary, the results seldom benefit the individual architect directly but rather benefit the client, the building industry at large and the general public. The growing pressure from clients to reduce fees militates against improvements in building design. While the architect carries the liability for innovation and the increased costs of the time and effort required to develop innovative concepts, the results do not benefit the architect financially. In addition to the lack of financial return, innovative concepts carry an additional disincentive in the unlimited professional liability imposed on the architect by the provincial legislation.

It is estimated that 75 percent of all firms are using computers in some way, primarily for word processing. Only very small firms are believed to be without computers. However, the technology for computer-aided design (CAD) or computer-aided drawings often used by consulting engineers does not usually produce the same cost-benefit returns when applied to the more complex, less standardized architectural



field. A 1990 survey of U.S. architects showed that only about 25 percent of all firms, or 35 percent of firms with computers, were using CAD. Within most of these offices, fewer than half of all drawings were produced using computer techniques.¹ It is estimated that the proportion is no greater and possibly less in Canada. The highly artistic and subjective nature of architectural design still limits the economical application of computer technology on a scale appropriate to the relatively small architectural office.

The lack of efficiency and the expense of computer workstations, software and training, when coupled with the lack of financial return, has added a significant financial load to the operation of an architectural office. Architects have traditionally operated with relatively little investment in physical assets. This has enabled small firms to get a ready start and then grow to their potential. The increased adoption of computer technology has greatly increased the need for capital investment in office operation, and opening a new office is now a larger financial undertaking. Computers are required as much to present an appearance of being up to date as to increase economic efficiency. Many clients now demand CAD technology, even if there is no direct benefit to the client. This industry is still very labour-intensive, even with the introduction of computers and computer-aided drafting.

The adoption of computer technology by architects appears to be slower and at a lower technical level in Canada than in the United States. The greater number of larger, better-financed, high-profile American firms using CAD may account for this impression.

Evolving Environment

The demand for architectural services is influenced primarily by general economic activity and its effect on building construction. If business is improving and new buildings are required, the demand for architects grows. The future growth of the industry appears limited, however. National projections by a major Canadian economic forecaster for building construction into the next decade indicate very little growth in real terms between 1990 and 1995.² From 1992 to 1995, for example, Canadian growth in non-residential construction is forecast at 2 percent per year. At present, an overcapacity of constructed buildings for the commercial and residential markets is developing in many regions. This overcapacity is leading to a reduced demand for architectural services.

The demand for architectural services can also be affected by government spending. In the fields of health and education, for example, most projects depend to a great degree on government funding. In these times of budgetary restraint, funds available for building construction have decreased; consequently, the forecast demand for architectural services in these areas over the next decade is not optimistic.

The architectural services industry is constantly evolving. Traditionally, more than 85 percent of architectural fees were derived from institutional, commercial and multifamily residential buildings. The activity in these markets relates closely to the patterns of overall economic growth. Even though the market for traditional design services is static at this time, opportunities are emerging in non-traditional areas. As a result, aggressive firms are exploring new markets and are offering a broader range of services, including urban and housing policy development, urban and community planning, urban design, prefeasibility and feasibility studies, architectural programming (a detailed analysis of client needs translated into building terms), facility planning, interior design, project management and building evaluations.

Joint ventures between architectural and engineering firms are becoming more common, as are co-operative projects with Canadian developers, material suppliers and financial institutions. Because these joint ventures are usually on a project-by-project basis, however, they do not give rise to the sustained marketing effort needed for effective export promotion. A few more aggressive firms have created loose marketing groups or an association between individual firms offering related services. For purposes of marketing, a distinctive group name may be used together with common or joint promotional material. A formal corporate unit is seldom created due, in many cases, to the restrictions placed on the ownership of architectural firms. One method firms have utilized to operate within these restrictions is to form a corporation of partnerships.

The FTA will increase opportunities and competition in both countries. However, other than easing immigration procedures, the FTA is expected to have little immediate impact on the exchange of architectural services between Canada and the United States. U.S. firms will provide strong competition due to their larger financial base, broader range of services offered and more sophisticated management.

¹American Institute of Architects, *Architectural Factbook: Industrial Statistics* (Washington, D.C.: AIA, 1990).

²Informetrica, *The Canadian Economy to 2000* (Ottawa: Informetrica, November 1990).



Competitiveness Assessment

The Canadian architectural services industry has not traditionally been a major player in world markets, as firms have focused primarily on meeting domestic needs. In fact, until the mid-1970s, Canadian architects were fully employed in Canada. Since that time, a few firms, despite their relatively small size and modest financial resources, have been slowly breaking into the export market.

Canada's leading firms now have established an international reputation for design excellence in all regions of the world from the United States and the United Kingdom to Hong Kong, India and the Middle East. These leading firms have won contracts for large, high-profile projects abroad against stiff foreign competition from larger companies. However, despite these achievements, a significant penetration of the international market is not expected. On average, Canadian architectural firms lack the strong financial base to permit them to carry on a determined international marketing strategy. Also, they have difficulty in competing with large, integrated companies that can provide architectural services as well as engineering, financing, construction and sometimes ongoing facilities management. Although such integrated companies are not considered part of the architectural industry, they may provide increasing competition for architects in the future.

Foreign firms have not penetrated the Canadian market. Canadian architectural firms are highly competitive domestically and provide Canada with a high level of building design and technology. Aesthetically as well as technically, Canadian buildings in general are equal or superior to those built in any other country.

For further information concerning the subject matter contained in this profile or in the ISTC initiative (see page 11), contact

Service and Construction Industries Branch
Industry, Science and Technology Canada
Attention: Architectural Services
235 Queen Street
OTTAWA, Ontario
K1A 0H5
Tel.: (613) 954-2952
Fax: (613) 952-9054



PRINCIPAL STATISTICS

	1974	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Firms ^a	1 283	2 200	N/A	N/A	2 602	2 629	2 888	3 100	3 200	3 200	3 200
Employment ^b	8 500	9 900	N/A	N/A	N/A	12 700	12 900	12 900	13 000	12 000	11 500
Total billings ^b (\$ millions)	314	501	420	480	533	686	700	722	850	N/A	N/A

^aData based on figures supplied by the Royal Architectural Institute of Canada.

^bISTC estimates.

N/A: not available

TRADE STATISTICS^a

	1974	1982	1983	1984	1985	1986	1987	1988			
Canadian billings in foreign countries (\$ millions)	6	12	N/A	N/A	N/A	6	N/A	6			
Domestic billings (\$ millions)	308	489	N/A	N/A	N/A	680	N/A	716			
Foreign billings in Canada (\$ millions)	3	2	N/A	N/A	N/A	2	N/A	2			
Canadian market (\$ millions)	311	491	N/A	N/A	N/A	682	N/A	718			
Canadian billings in foreign countries (% of total billings)	2	2	N/A	N/A	N/A	1	N/A	1			
Foreign billings in Canada (% of Canadian market)	1	<1	N/A	N/A	N/A	<1	N/A	<1			

^aOne of the major problems in identifying trends in this industry is the lack of reliable statistical data. What little data exist come from a number of sources, including Statistics Canada, each collected by a different method; therefore, collating data from the different sources is virtually impossible. Most numbers in this table are ISTC estimates.

N/A: not available



REGIONAL DISTRIBUTION^a (average over the period 1986 to 1988)

	Atlantic	Quebec	Ontario	Prairies	British Columbia
Establishments (% of total)	4	30	39	13	14
Employment (% of total)	5	26	42	13	14

^aISTC estimates.

MAJOR FIRMS

Name	Country of ownership	Location of head office
Adamson Associates Architects Planners	Canada	Toronto, Ontario
Architects Crang and Boake Inc.	Canada	Toronto, Ontario
ARCOP Associates	Canada	Montreal, Quebec
The Cohos Evamy Partners	Canada	Calgary, Alberta
Dunlop Farrow Inc. Architects	Canada	Toronto, Ontario
Hemingway Nelson Architects	Canada	Vancouver, British Columbia
Musson Cattell Mackey Partnership	Canada	Vancouver, British Columbia
NORR Partnership Limited	Canada	Toronto, Ontario
Waisman Dewar Grout Carter Inc.	Canada	Vancouver, British Columbia
The Webb Zerafa Menkes Housden Partnership	Canada	Toronto, Ontario
Zeidler Roberts Partnership Architects	Canada	Toronto, Ontario



INDUSTRIES ASSOCIATIONS

Alberta Association of Architects
Duggan House
10515 Saskatchewan Drive
EDMONTON, Alberta
T6E 4S1
Tel.: (403) 432-0224
Fax: (403) 439-1431

Architects Association of New Brunswick
73 Duke Street
SAINT JOHN, New Brunswick
E2L 1N4
Tel.: (506) 658-6116

Architects Association of Prince Edward Island
P.O. Box 1766
CHARLOTTETOWN, Prince Edward Island
C1A 7N4
Tel.: (902) 566-3699
Fax: (902) 566-3768

Architectural Institute of British Columbia
Suite 103, 131 Water Street
VANCOUVER, British Columbia
V6B 4M3
Tel.: (604) 683-8588
Fax: (604) 683-8568

Manitoba Association of Architects
Courtyard Building, 2nd Floor
100 Osborne Street South
WINNIPEG, Manitoba
R3L 1Y5
Tel.: (204) 477-5290

Newfoundland Association of Architects
P.O. Box 5204
ST. JOHN'S, Newfoundland
A1C 5V5
Tel.: (709) 726-8550

Nova Scotia Association of Architects
1361 Barrington Street
HALIFAX, Nova Scotia
B3J 1Y9
Tel.: (902) 423-7607
Fax: (902) 425-7024

Ontario Association of Architects
50 Park Road
TORONTO, Ontario
M4W 2N5
Tel.: (416) 968-0188
Fax: (416) 968-0867

Ordre des architectes du Québec
1825 René-Lévesque Boulevard West
MONTREAL, Quebec
H3H 1R4
Tel.: (514) 937-6168
Fax: (514) 933-0242

Royal Architectural Institute of Canada (RAIC)
Suite 330, 55 Murray Street
OTTAWA, Ontario
K1N 5M3
Tel.: (613) 232-7165
Fax: (613) 232-7559

Saskatchewan Association of Architects
The Marr Residence
362 - 11th Street East
SASKATOON, Saskatchewan
S7N 0E7
Tel.: (306) 242-0733
Fax: (306) 664-2598



SECTORAL STUDIES AND INITIATIVES

The Construction Industry and Capital Projects Directorate of ISTC is working closely with the national association, the Royal Architectural Institute of Canada (RAIC). Co-operative initiatives are being undertaken to address commercial issues and serious data gaps relating to this industry.

ISTC has financially supported industry-initiated negotiations aimed at developing a detailed agreement with U.S. architects. These agreements may become an integral part of the Canada-U.S. Free Trade Agreement.

The RAIC embarked on an in-depth analysis and study of trends facing the future of architects. This study, called *Architecture in the Year 2000*, was conducted parallel to a similar study in the United States by the American Institute of Architects. The objective of this study was to identify the social, technological, economic, environmental and political trends anticipated over the next decade. Once identified, an analysis of their impact on the future of architects was studied. The results will assist the practising architect to be better prepared to adjust to changes arising in the future.

Architecture in the Year 2000 was presented at the annual meeting of the RAIC in Toronto, 24-25 October 1991. This report shows that the architectural industry will be facing a changing environment over the next decade, which will significantly challenge the profession. The attitude of society towards the preservation of the environment and the impact of this on the construction industry will challenge the architects to lead or be led. The rapidly changing technology and greater availability of information on this technology is producing a more sophisticated and enlightened clientele, who will be demanding more information and a high level of service from the architect. The traditional leadership role of the architect in the design team will be under increasing pressure from both the client and other professions. It is forecast that the market for architectural services is also changing. It is expected that the market for new building will decrease, with more interest being directed towards conserving and reconditioning the existing building stock. Participants in the survey have expressed the opinion that Canada is less prepared at this time for this transition and that it lags behind other countries in the development and application of new science and technology in the construction industry. The future of this segment of the Canadian industry may depend on how well the industry reacts to this report and prepares to meet the year 2000.

Printed on paper containing recycled fibres.





Imprime sur du papier contenant des fibres recyclées.

Ce rapport a été présenté à la rencontre annuelle de l'IRAC, tenue les 24 et 25 octobre 1991 à Toronto. Selon les données industrielles, la rédaction de l'IRAC, au cours de la prochaine décennie, a une évolution du milieu qui posera des défis importants à la profession. Devant l'attitude nouvelle de la société à l'égard de la préservation de l'environnement et des effets de celle attitude sur l'industrie de la construction, les architectes ont deux alternatives : développer la force motrice du changement ou être à la remorque de celle-ci. L'évolution rapide de la technologie et la diffusion plus large de l'information technique rendent la client mieux informée et plus exigeante. Celle-ci demandera à l'architecte plus d'information et un niveau plus élevé de services. L'architecte doit s'adapter à ce que son rôle de chef de file, qui lui étais naturellement dévolu au sein de l'équipe de conception, soit de plus en plus constesté par le client et les autres professionnels. On peut dire que le marché des services d'architecte subira également des changements. Ainsi, s'attend-on à ce que le marché de la nouvelle construction diminue au profit de la conservation et de la réuse en état du stock immobilier existant. Selon les résultats de l'enquête de l'IRAC, l'industrie de la construction diminue au profit de la conservation et de la réuse en état du stock immobilier existant.

URAC a entrepris une analyse en profondeur des tendances qui modèlent l'avenir des architectes. Cette étude, intitulée « L'architecte en 2000 », a son pendant aux États-Unis, sous la forme d'une étude semblable menée par l'American Institute of Architects. Cette étude a pour objectif de prévoir les tendances sociales, technologiques, économiques, environnementales et politiques qui influeront sur la profession dans la dernière partie du siècle. Les résultats de cette étude sont présentés dans le tableau suivant.

STC a appuyé financièrement les négociations engagées par l'industrie avec les archétypes américains en vue d'élaborer une entente détaillée. Lorsqu'elle sera finalisée, cette entente ferait partie intégrante de l'accord de libre-échange entre le Canada et les Etats-Unis.

La Direction de l'industrie de la construction et des projets d'immobilisation du ISTC travaille en étroite collaboration avec l'Association nationale des architectes, l'Institut royal d'architecte du Canada (IRAC). Ensemble, ces organismes proposent des initiatives qui visent à combler les graves pénuries de main-d'œuvre dans l'industrie de la construction. Ces dernières sont destinées à faciliter l'accès à l'information et à l'expertise nécessaires pour répondre aux besoins de l'industrie.

INITIATIVES ET ÉTUDES SECTORIELLES



ASSOCIAZIONI DEL LAVORO

Alberta Association of Architects
Nova Scotia Association of Architects
Dunlop House
1361 11th Street
Edmonton, Alberta T5J 1G4

Telexcopieur : (403) 439-143

SAINTE-JEAN (Nouveau-Brunswick)

Association des architectes du Nouveau-Brunswick

9119-809 (905) : 161

C.P. 1766

Telegoni : (902) 566

VANCOUVER (Colombie-Britannique)

Telescopieur : (604) 683-8568

Edifice Courtyard, 2^e étage

Architectural Institute of British Columbia
131, rue Water, bureau 103
Vancouver (Colombie-Britannique)
55, rue Murray, bureau 330
OTTAWA (Ontario)
K1N 5M3
Tel. : (613) 232-7165
Telex : (613) 232-7599
Télécopieur : (613) 232-7569
Télécopieur : (604) 683-8588
Tel. : (604) 683-8588
V6B 4M3
KIN 5M3
Tel. : (613) 232-7165
Télécopieur : (604) 683-8568

Architects Association of Prince Edward Island	C.P. 1766	1825, boul. René-Lévesque Ouest	MONTRÉAL (Québec)	CHARLOTTETOWN (Île-du-Prince-Édouard)	CIA TNA	Tel. : (902) 566-3699	Telegcopieur : (902) 566-3768
Ordre des architectes du Québec		1825, boul. René-Lévesque Ouest	MONTRÉAL (Québec)	CHARLOTTETOWN (Île-du-Prince-Édouard)	CIA TNA	Tel. : (902) 566-3699	Telegcopieur : (902) 566-3768
			H3H 1R4				
			Tel. : (514) 937-6168				
			Tel. : (514) 933-0242				

Emploi (% du total)	Atlantique	Québec	Ontario	Prairies	Colombie-Britannique	Emploi (% du total)	Adamsen Associates Architects Planners	Architects Crang and Boake Inc.	ARCOP Associates	The Choos Eamy Partners	Dullop Farrow Inc. Architects	Hemingway Nelson Architects	Musson Cattell Mackay Partnership	NORR Partnership Limited	Walsman Dewar Grout Carter Inc.	The Webb Zerafa Menkes Housden Partnership	Zeldeier Roberts Partnership Architects	
Établissements (% du total)	4	30	39	13	14	5	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	
Nombre	Emploiement du siège social						d'appartenance						Pays					
Adamsen Associates Architects Planners	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	
Architects Crang and Boake Inc.	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	
ARCOP Associates	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	
The Choos Eamy Partners	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	
Dullop Farrow Inc. Architects	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	
Hemingway Nelson Architects	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	
Musson Cattell Mackay Partnership	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	
NORR Partnership Limited	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	
Walsman Dewar Grout Carter Inc.	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	
The Webb Zerafa Menkes Housden Partnership	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	
Zeldeier Roberts Partnership Architects	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	Canada	

PRINCIPALES SOCIÉTÉS

Nom

Pays

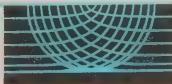
d'appartenance

Emploiement du siège social

*Estimations d'ISTC.

Établissements (% du total)	Atlantique	Québec	Ontario	Prairies	Colombie-Britannique	Établissements (% du total)	Atlantique	Québec	Prairies	Colombie-Britannique	Établissements (% du total)	Atlantique	Québec	Prairies	Colombie-Britannique	
4	30	39	13	14	5	5	26	42	13	14	4	30	39	13	14	
Adamsen Associates Architects Planners	Canada	Canada	Canada	Canada	Canada	Adamsen Associates Architects Planners	Canada	Canada	Canada	Canada	Architects Crang and Boake Inc.	Canada	Canada	Canada	Canada	Canada
Architects Crang and Boake Inc.	Canada	Canada	Canada	Canada	Canada	Architects Crang and Boake Inc.	Canada	Canada	Canada	Canada	ARCOP Associates	Canada	Canada	Canada	Canada	Canada
ARCOP Associates	Canada	Canada	Canada	Canada	Canada	ARCOP Associates	Canada	Canada	Canada	Canada	The Choos Eamy Partners	Canada	Canada	Canada	Canada	Canada
The Choos Eamy Partners	Canada	Canada	Canada	Canada	Canada	The Choos Eamy Partners	Canada	Canada	Canada	Canada	Dullop Farrow Inc. Architects	Canada	Canada	Canada	Canada	Canada
Dullop Farrow Inc. Architects	Canada	Canada	Canada	Canada	Canada	Dullop Farrow Inc. Architects	Canada	Canada	Canada	Canada	Hemingway Nelson Architects	Canada	Canada	Canada	Canada	Canada
Hemingway Nelson Architects	Canada	Canada	Canada	Canada	Canada	Hemingway Nelson Architects	Canada	Canada	Canada	Canada	Musson Cattell Mackay Partnership	Canada	Canada	Canada	Canada	Canada
Musson Cattell Mackay Partnership	Canada	Canada	Canada	Canada	Canada	Musson Cattell Mackay Partnership	Canada	Canada	Canada	Canada	NORR Partnership Limited	Canada	Canada	Canada	Canada	Canada
NORR Partnership Limited	Canada	Canada	Canada	Canada	Canada	NORR Partnership Limited	Canada	Canada	Canada	Canada	Walsman Dewar Grout Carter Inc.	Canada	Canada	Canada	Canada	Canada
Walsman Dewar Grout Carter Inc.	Canada	Canada	Canada	Canada	Canada	Walsman Dewar Grout Carter Inc.	Canada	Canada	Canada	Canada	The Webb Zerafa Menkes Housden Partnership	Canada	Canada	Canada	Canada	Canada
The Webb Zerafa Menkes Housden Partnership	Canada	Canada	Canada	Canada	Canada	The Webb Zerafa Menkes Housden Partnership	Canada	Canada	Canada	Canada	Zeldeier Roberts Partnership Architects	Canada	Canada	Canada	Canada	Canada

REPARTITION RÉGIONNALE* IMMOBILIÈRE DE LA GÉNÉRE 1986-1988

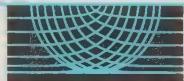


1974	1982	1983	1984	1985	1986	1987	1987	1988
CHIFFRE D'AFFAIRES DES CABINETS CANADIENS À L'ÉTRANGER (millions de \$)								
6	12	n.d.	n.d.	n.d.	6	n.d.	6	
Chiffre d'affaires des cabinets canadiens au Canada (millions de \$)	308	489	n.d.	n.d.	680	n.d.	716	
Chiffre d'affaires des cabinets canadiens au Canada (millions de \$)	3	2	n.d.	n.d.	2	n.d.	2	
Marché canadien (millions de \$)	311	491	n.d.	n.d.	682	n.d.	718	
Chiffre d'affaires des cabinets canadiens à l'étranger (millions de \$)	2	2	n.d.	n.d.	1	n.d.	1	
Chiffre d'affaires des cabinets étrangers au Canada (% du chiffre d'affaires total)			n.d.	n.d.		n.d.		
Chiffre d'affaires des cabinets étrangers au Canada (% du marché canadien)			n.d.	n.d.		n.d.		
La présente statistique indique l'unité des principales difficultés auxquelles on se bute lorsqu'il faut souhaiter dégager les tendances de cette industrie. Les données disponibles proviennent de diverses sources, y compris Statistique Canada, et différentes méthodes ont été utilisées à leur collection; le regroupement de ces données s'avère donc parfois impossible. La plupart des chiffres de ce tableau sont des estimations du ISTC.								
n.d. : non disponible								

PRINCIPALES STATISTIQUES

STATISTIQUES COMMERCIALES

1974	1982	1983	1984	1985	1986	1987	1988	1989
CHIFFRE D'AFFAIRES TOTALE (millions de \$)								
Cabinets	1 283	2 200	n.d.	n.d.	2 629	2 888	3 100	3 200
Employés	8 500	9 900	n.d.	n.d.	12 700	12 900	13 000	12 000
Cabinets	3 14	501	420	480	533	686	700	722
Chiffre d'affaires total (millions de \$)								
Données fondées sur des chiffres communiqués par l'Institut royal d'architecture du Canada.								
Estimations du ISTC.								
n.d. : non disponible								



qualités esthétiques et techniques, les immobiliers canadiens sont dans l'ensemble également supérieurs à tout ceux que l'on construit partout ailleurs dans le monde.

Pour plus de renseignements sur ce dossier ou sur les initiatives sectorielles d'ISTC (voir page 12),

Définition générale des industries des services et

Télécopieur : (613) 952-9054

K1A OH5
OTTAWA (Ultralio)

235, rue Queen
Ottawa : Architectes

du la Gouvernement
Industrie, Sciences et Technologie Canada

Définition générale des industries des services et de la construction

les initiatives sectorielles d'ISTC (voir page 12), s'adresser à la

Pour plus de renseignements sur ce dossier ou sur

Sur certains marchés, l'insécurité crée des superstitions à tout ce qui n'a pas été construit partout ailleurs dans le monde.

qualités esthétiques et techniques, les membres canadiens sont dans l'ensemble déjà au supérieur à tout ce qu'il aille

LALE accroîtra les débouchés et avivera la concurrence dans les deux pays. Mais, si l'on excepte l'assouplissement des procédures à la frontière, l'ALE aura peu de répercussions à court terme sur l'échange de services d'architecture entre le Canada et les États-Unis. Les cabines américaines livreront une vive concurrence, grâce à leur base financière plus solide, à leur gamme élargie de services et à leurs techniques de gestion plus perfectionnées.

raison des restrictions imposées quant au mode de propriété des cabinets d'architectes. Une des façons qu'ont trouvées les cabinets pour contourner ces restrictions consiste à

Evaluation de la compétitivité

à leur gamme élargie de services et à leurs techniques de gestion plus perfectionnées.

Canada et les États-Unis. Les cabinets américains livreront une vive concurrence, grâce à leur base financière plus solide.

des procédures à la frontière, l'ALE aura peu de répercussions à court terme sur l'échange de services d'architecture entre le

LALE accroîtra les débouchés et ravivera la concurrence dans les deux pays. Mais, si l'on accepte l'assouplissement

les cabinets pour contourner ces restrictions consiste à se regrouper.

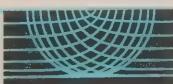
raison des restrictions imposées quant au mode de propriété des cabinets d'architectes. Une des lagons qu'ont trouvées

COMME N'EST-IL PAS DÉSASTREUX DE SE FAIRE DÉPASSE PAR DES MARCHEURS STRANGERS. LES CHEFS DE FILE DU SECTEUR AU CANADA SE SONT ACQUIS,

que des cabinets, malgré leur envergure relativement faible et leurs ressources financières modestes, ont lentement

Les casbinets canadiens d'archéologues jouent un rôle important sur les marchés mondiaux, ayant prélevé se concentrer sur les besoins des marchés internationaux. De fait, jusqu'à mi-mai 1970, les archéologues canadiens avaient amplement travaillé au Canada. Depuis lors, quel-

Evaluation de la compétitivité



Les coentrepreneurs renouissant des cabinets d'architectes et d'ingénieries sont de plus courantes, de même que les projets coopératifs entre promoteurs, tourneuses de matériaux et établissements financiers canadiens. Mais, comme ces coentrepreneurs sont la plupart du temps formés de maires ponctuels, selon les projets, elles ne suscitent pas les activités soutenues de commercialisation nécessaires à une promotion efficace à l'étranger. Quelques autres nets particulièrement dynamiques ont créé des groupes de marketing informels. D'autres entreprises offrent des services connexes se sont associées pour promouvoir leurs services. A des fins de marketing, de tels groupes peuvent se choisir un nom distinctif et réunir leurs documents de promotion ou en utiliser le nom commun. Il est rare que l'un assiste alors à la création d'une société en bonne et due forme, souvent en

Cette demande peut également être influencée par les dépenses des gouvernements. Dans les domaines de la santé et de l'éducation, par exemple, la plupart des projets dépendent dans une large mesure du financement gouvernemental. En ces temps de restrictions budgétaires, les fonds disponibles pour la construction d'immeubles ont diminué, ce qui augure rien de bon pour la demande de services d'architecture dans ces secteurs au cours de la prochaine décennie.

Le secteur de l'architecture ne cesse d'évoluer. Dans le passé, plus de 85 % des honoraires des architectes proviennent de la construction d'immeubles commerciaux ou de services collectifs et d'habitations multifamiliales. L'activité sur ces marchés suit de près les tendances de l'économie en général. Même si la demande de services de conception classiques est stable en ce moment, des débouchés s'ouvrent dans des domaines nouveaux. En conséquence, les cabinets d'architectes les plus dynamiques se lancent à l'assaut des nouveaux marchés et offrent un éventail plus large de services, y compris l'élaboration de politiques en matière d'urbanisme et de construction domiciliaire, l'aménagement urbain et les études de faisabilité, la programmation architecturale et les études d'urbanisme, les études préliminaires et communautaire, le design urbain, les études préliminaires (analyse détaillée des besoins d'un client et intégration des données ainsi obtenues à la construction de l'immeuble), la planification d'installations, la décoration intérieure, la gestion des risques et l'immobilier.

La croissance du secteur canadien de la construction non résidentielle devrait se chiffrer à 2 % par année. De nom-brées régions comme l'Ontario et l'Alberta ont démontré des performances meilleures que la moyenne au cours des dernières années. Les provinces qui ont connu une croissance plus forte que la moyenne sont l'Alberta, l'Ontario et la Colombie-Britannique. Ces trois provinces ont connu une croissance de 3,5 % par année au cours des dernières années. Les provinces qui ont connu une croissance plus faible que la moyenne sont la Saskatchewan, la Manitoba et l'Île-du-Prince-Édouard. Ces trois provinces ont connu une croissance de 1,5 % par année au cours des dernières années.

La demande de services d'archéologie dépend principalement de l'activité économique générale et des effets de celle-ci sur le secteur de la construction. Quand les affaires vont bien et qu'il y a besoin de nouveaux immeubles se fait sentir, la demande de services d'archéologie augmente. Cependant, les perspectives de croissance future de l'industrie sont peu encourageantes. En effet, selon les projections établies par un important bureau canadien d'économistes qui se spécialise dans la prospective pour le secteur de la construction immobilière au cours de la prochaine décennie, celle-ci connaîtra une croissance très faible en chiffres réels entre 1990 et 1995. À titre d'exemple, entre 1992 et 1995, le secteur immobilier devrait faire face à une croissance très faible en chiffres réels entre 1990 et 1995. À titre d'exemple, entre 1992 et 1995,

Évolution du milieu

Centre proportion n'est pas plus forte, et est probablement plus taxable, au Canada. La nature hautement artificielle et subjective de la conception architecturale limite toujours l'application ren- aux cabinets d'architectes dont la taille est relativement réduite. La faible efficacité des techniques informatiques en archi- tecture et le coût élevé des postes de travail informatiques, des logiciels et de la formation en regard des minces avantages financiers à en tirer, ont slouardi les charges financières liées à l'exploitation d'un bureau d'architectes. Depuis toujours, les architectes pouvaient fonctionner sans avoir à investir des sommes importantes dans le matériel. Cela permettait aux petits cabinets de démarrer rapidement et de prendre ensuite le temps nécessaire pour atteindre leur plein potentiel. Mais le recours accru à la technologie informatique a alors été - nécessairement en capitaux nécessaires aux activités d'un bureau, de nat une entreprise beaucoup plus importante au point de vue financier. Les ordinaires sont essentielles, autant pour donner une réponse directe à la page que pour accroître le rendement. De nombreux clients exigent maintenant la technologie CAD, même si cela ne leur procure aucun avantage direct. L'architecture est encore une industrie à forte intensité de main-d'œuvre, malgré l'information et le dessin assisté par ordinateur.

plus complexe et moins normalisé de l'architecture. Une demande menée en 1990 auprès des architectes américains a révélé qu'environ 25 % seulement de l'ensemble des cabinets possètent 35 % des équipements d'ordinateurs, utilisent la CAO. Dans la plupart de ces bureaux, moins de la moitié de tous les dessins sont produits à l'aide de l'ordinateur. On estime que

des jasas aux militaires et aux civils ou au travailleur dans le secteur de l'industrie et de la construction. Par définition, la conciliation a pour but de résoudre les litiges et les conflits entre les deux parties. La conciliation est une procédure de résolution de conflit qui vise à trouver une solution amiable entre les parties en litige. La conciliation est une procédure de résolution de conflit qui vise à trouver une solution amiable entre les parties en litige. La conciliation est une procédure de résolution de conflit qui vise à trouver une solution amiable entre les parties en litige.

Les architectes réalisent peu de recherche et de développement (R-D), d'ordre scientifique, même si les agissements soutenus à titre de conseils dans la mise à l'essai ou la mise en œuvre des fruits de la R-D. Ils jouent toutefois un rôle important au chapitre de l'innovation, en trouvant de nouveaux tâches et en mettant en œuvre des méthodes et des outils de recherche et de développement.

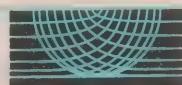
Facteurs techniques

Les cabines d'architectes doivent faire des efforts con-
cernant leur compétences et obtenir des clients
très difficiles à gagner la confiance d'un client
pour faire valoir leurs compétences et leur faire
confiance. Il est plus difficile de gagner la confiance d'un client
lorsqu'on lui vend une idée que lorsqu'on lui fournit un pro-
duit tangible. Pour établir sa crédibilité, l'architecte doit égale-
ment se rendre à plusieurs reprises chez ses clients éventuels.
Sur les marchés d'exportation, cette nécessité peut se traduire
par des frais de déplacement considérables. En outre, la
nécessité de fournir au client des plans et des dessins préli-
minaires pour illustrer son concept, avant de signer un con-
trat, peut coûter des centaines de milliers de dollars qui
constituent des pertes pour les cabinets non rentables.

- La table d'envergure des cabinets canadiens qui dispo-
sent rarement des ressources humaines et financières
comparables à celles de leurs concurrents internationaux;
- L'absence, au Canada, de cabines intelligibles d'architectes
capables d'offrir des services de conception-construction
ou des services clés en main.

- (a) vive concurrence à laquelle doivent faire face les Canadiens lorsqu'ils tentent de se débarrasser des marchés ou d'autres cabinets étrangers sont déjà solidement implantés;
- (b) restrictions à l'obtention de permis et les réglements d'immigration imposés par les pays étrangers, y compris les pays nouvellement industrialisés (PNI), qui possèdent ou sont en train de créer leur propre secteur de services d'archétype, lequel répond habilelement à la plupart des leurs besoins;

- Il arrive que les cabinets qui ont un bureau en activité dans la région du projet soient favorisés, mais cela peut facillement se produire par le besoin de communications entre les firmes et le client, ou la nécessité d'assurer la supervision du chantier. Pas plus qu'aux États-Unis, cette politique ne devrait être modifiée par L'ALE.
- Quatre obstacles principaux s'opposent à l'exportation des services des architectes canadiens :



Des programmes importants ont été accomplis en vue de la signature d'un accord de réciprocité entre les associations américaines et canadiennes d'architectes. En 1991, une entente est intervenue entre le Comité des conseils d'architectes du Canada et le National Council of Architectural Registration Boards, organisations qui en chapeautent d'autres et coordonnent les questions de réglementation au Canada et aux États-Unis, respectivement. Celle entente a servi à homologuer les normes qui permettent aux architectes de chaque pays de pouvoir exercer d'un côté comme de l'autre des deux pays. On est également parvenu à établir des relations. On est également parvenu à établir des critères de la frontière lorsqu'ils sont inscrits au tableau de l'autre de la frontière. Les deux normes qui permettent aux architectes de chaque pays d'exercer leur profession au Canada. La réforme a été votée par les deux pays après deux ans d'efforts soutenus. Au Canada, les barrières provinciales d'architectes se sont entendues sur un objectif commun qui consiste à garantir à tout un territoire du pays la reconnaissance de droit est dispensé de tout autre examen en vigueur sur le territoire ou l'association professionnelle. Cette éliminatation des barrières entre provinces a été rendue possible par l'adoption, par toutes les associations provinciales, d'une norme de reconnaissance professionnelle qui a trait aux modalités de l'examen d'application post-secondaire et aux modalités de l'expérience de travail unique en ce qui concerne les exigences d'admission dans les établissements d'enseignement à l'autre. Tant au Canada qu'aux États-Unis, les gouvernements ont pour politique de privilégier les fournisseurs de services administratifs du gouvernement américain. Même si l'administration des services gérera le secteur entre le Canada et les États-Unis, tout comme d'une province à l'autre. Tant au Canada qu'aux États-Unis, les gouvernements ont pour politique de privilégier les fournisseurs de services administratifs du gouvernement américain. Cela n'impose aucune restriction aux cabinets étrangers, elle accorde toute fois de contrats aux cabinets qui ont un bureau en activité à l'endroit même où doit être réalisée le projet. Cette condition sera pas modifiée par l'entrée en vigueur de l'ALE. Au Canada, la plupart des gouvernements provinciaux et des municipalités appliquent également des politiques d'achat local. Quant au gouvernement fédéral, il impose aucune restriction particulière en ce qui a trait à l'embaufrage des cabinets d'architectes non canadiens. Les cabinets étrangers doivent toutefois satisfaire aux mêmes critères d'accréditation que les cabinets canadiens, y compris la détention d'un permis d'exercice dans la province du projet.

Comme l'activité de ce secteur ne donne pas lieu à l'exportation ni à l'importation de produits, les services offerts par les architectes ne sont frappés d'aucun tarif. Cependant, la

Facteurs liés au commerce

Le chiffre d'affaires réalisé à l'étranger par des cabinets canadiens est relativement peu élevé. Certains cabinets canadiens ont réussi à percer sur les marchés internationaux, mais la majorité d'entre eux ne possèdent qu'un énervure, ni l'expé-rience, ni les ressources financières nécessaires pour com-merciliser efficacement leurs services sur ces marchés. De plus, seuls quelques cabinets canadiens ont réussi à se spe-cialiser dans un domaine précis de l'architecture. Cela les place en position de faiblesse face aux clients étrangers qui recherchent habituellement des services de spécialistes qu'ils trouvent pas chez eux.

La force des grands cabinets canadiens réside dans la qualité de leurs projets architecturaux et dans leur recours à la technologie. L'industrie canadienne de la construction est à l'avant-garde dans les domaines de la mise au point et de l'uti-lisation de nouveaux matériaux et de nouvelles techniques de construction, et les architectes canadiens ne tardent pas à incor-porer ces innovations dans la conception de nouveaux bâtiments. Si l'on se tient au strict rôle d'architecte, les grands cabinets canadiens sont très concurrentiels, comme en témoignent les nombreux concours internationaux qu'ils ont remportés partout dans le monde. Toutefois, comme

de proportion de la contribution de ce secteur au produit intérieur brut (PIB), l'industrie de la construction est deux fois plus importante au Canada qu'aux États-Unis. Cela pourrait s'expliquer par une maturité plus grande de l'industrie canadienne que celle, ou par le fait que la rigueur du climat canadien impose des normes de construction plus strictes.

En proportion de sa population, le Canada compte près-
que deux fois plus de cabines d'architectes que les États-Unis.
Cette situation est largement attribuable au fait que, en termes
de revenus des architectes, il y a peu de différences entre les deux

À l'extrémité, les services d'architecte font la plupart du temps partie du large éventail des services offerts par de grandes sociétés intégrées qui réalisent fréquemment des projets clés en main. Ces entreprises sont souvent des sociétés nationales ou multinationales, mises sur pied et dirigées non par des architectes professionnels, mais par des ingénieurs, des promoteurs ou d'autres gens d'affaires qui commerciales sont généralement davantage financières

Au Canada, les projets de construction sont habituellement lancés et réalisés par des promoteurs qui confient ensuite les travaux de conception à un cabinet d'architectes ou à leurs propres services intérieurs. Dans ce genre de projets, le client de l'architecte est le promoteur, et non l'acheteur ou l'utilisateur final. Bien que cette méthode permette de réaliser de façon efficace les projets de construction, l'opinion indépendante, impartial et professionnelle de l'architecte risque de céder le pas aux promoteurs qui, dans la plupart des cas, sont des personnes ou des entreprises qui ont des intérêts financiers ou promotionnels dans les projets.

Au Canada, les cadres d'architectes doivent tout
mal émergent être sous le contrôle majoritaire d'architectes.
Habituellement, les architectes canadiens ont été guidés
dans le choix de cette profession par leur intérêt personnel
à l'égard de la conception d'immeubles. Régie générale, ils
se préoccupent peu de faire de leur cabinet une grande entre-
prise. Des sociétés étrangères mènent de fait des entreprises

Facteurs structurels

Forces of Raidresses

Biens que les statistiques disponibles soient incomplètes, il semble que depuis 1975 l'industrie ait connu un ralentissement de son activité, par rapport à la croissance observée au cours des années 1950 et 1960. Ainsi, entre 1977 et 1982, la croissance réelle des revenus (en dollars constants de 1981) a-t-elle été en moyenne de moins de 2 % par année. Durant la même période, le nombre de cabinets a augmenté en

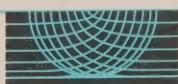
que l'heure 3 200 cabines d'architectes dénombrées au Canada en 1991 possédaient plus d'un bureau. Cette année-là, un total de 11 500 personnes détenaient un emploi dans ce secteur.

Au Canada, les architectes constituent une profession autonome, sous le contrôle des lois provinciales. En effet, il existe dans chaque province une loi sur les architectes qui accorde à l'association des architectes de cette province le droit de déterminer les conditions requises pour être inscrit au tableau de la profession, de livrer leur permis d'exercice à tous les architectes de la province, de limiter l'exercice de l'architecte aux seuls titulaires de permis et de voir à ce que tous les titulaires de permis assurent des services professionnels de qualité. Cette manière de régir la profession vise à faire en sorte que les architectes responsables de la conception de bâtiments possèdent la formation et la compétence appropriées. Dans la plupart des pays du monde, la profession est régie de façon semblable, sauf en Suède, en Norvège, en Finlande, aux Pays-Bas et en Yougoslavie, entre autres, où il existe aucune loi sur les architectes. Dans ces pays, n'importe qui peut s'attribuer le titre d'architecte. Dans d'autres pays, les lois établissent différemment de ceux qui sont en vigueur au Canada, et sont souvent appliquées de façon moins rigoureuse.

Les cabinets d'architectes sont généralement de petites entreprises et n'emploient en moyenne que cinq personnes chacun. Une des raisons de la taille réduite des cabinets est le fait que la plupart des architectes jugent important de participer directement et personnellement à la conception de leurs projets. Ainsi, estimant probablement que la gestion de projets aux projets, seulement 6 % environ des personnes participant à la gestion de la gestion de projets.

Les architectes sont généralement de petits entreprises et n'emploient en moyenne que cinq personnes chacun. Une des raisons de la taille réduite des cabinets est le fait que la plupart des architectes jugent important de participer directement et personnellement à la conception de leurs projets. Ainsi, estimant probablement que la gestion de projets aux projets, seulement 6 % environ des personnes

globallement l'immuble, puis prépare les plans d'exécution et les documents contractuels, surveille les travaux de construction et les paiements. De nos jours, l'ajoutent à ce rôle traditionnel de plus en plus de services de conseil en gestion et autorise les paiements. Des projets de conseil en gestion ou en coordination de projets. Les ingénieurs-conseils sont également appelés à compliquer. Ils se spécialisent généralement dans les études techniques pour autres, et travaillent habituellement en sous-mécaniques relatives à la structure et aux systèmes électriques, traînance pour les architectes. Il arrive que les rôles de maître d'œuvre et de sous-traitant soient inversés, notamment lorsque l'aspect technique est prépondérant dans un projet, comme dans le cas des usines industrielles ou chimiques, et qu'il importe avant tout d'assurer l'efficacité d'un procédé industriel. Les ingénieurs intervenant essentiellement sur le plan technique, tandis que les architectes se préoccupent non seulement de l'aménagement rationalisé de l'espace en fonction des besoins des clients, mais également du confort, de la santé, de la sécurité, du bien-être et du plaisir esthétique des utilisateurs.



- Aménagement en immobilier
- Ingénieurs-conseils
- Entrepreneurs en construction
- Profils sur des sujets connexes, s
- Construction immobilière. Nous p
- Considérez comme partie intégrante
- et des conseils en architecture. C
- au public, de façon autonome, de
- privées autorisées en vertu des lo

Structure

Structure et rendement

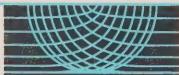
Ministre de l'Industrie, des Sciences et de la Technologie
Michael H. Wilson

Veiller à ce que tout le document d'information, telle que l'ensemble de la documentation, soit adapté dans la mesure où il est nécessaire à la correction de la version parue et corriger de la série de documents.

AVANT-PROPOS

ARCHITECTS

L66L-066L



Canada

Pour recevoir un exemplaire de l'une des publications DLTIC ou de CEC, veuillez communiquer avec le Centre de services aux entreprises ou le Centre de commerce extérieur et plus près de chez vous. Si vous désirez en recevoir plus d'un exemplaire communiquiez avec l'un des trois bureaux suivants.

Demandedes de publications

Industrie, Sciences et Technologie Canada (ISTC) et Commerce extérieur Canada (CEC) ont mis sur pied des centres d'information dans les bureaux régionaux de tout le pays. Ces centres permettent à leur clientèle de se renseigner sur les services, les documents d'information et les programmes et l'expérience professionnelle disponibles dans ces deux ministères en matière d'industrie et de commerce. Pour obtenir de plus amples renseignements, veuillez communiquer avec l'un ou l'autre des bureaux dont la liste apparaît ci-dessous.

Centres de services aux entreprises d'ISTC et Centres de commerce extérieur

